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| 09/632,587 | 08/04/2000 | Kiyomitsu Takizawa | 122.1414 | 1898 |

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EXAMINER

KING, JUSTIN

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2111

DATE MAILED: 05/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/632,587

Applicant(s)

TAKIZAWA ET AL.

Examiner

Justin I. King

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/7/05.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 10-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☒ Claim(s) 10-16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of the KEEMUX KVM Switch by the Network Technology Inc., Lee (U.S. Patent No. 5,935,254), and Wilder et al (U.S. Patent No. 6,557,170).

Referring to claim 1: The KEEMUX is a PC switching device installed between a keyboard and a plurality of personal computers; it connects to each computer individually and supports the SUN computer's operations, and the Sun computer features the power control via the keyboard stroke. Under KEEMUX's Normal Operating Mode, only the selected PC receives the keyboard signals; furthermore, the KEEMUX has a LED light for indicating the currently selected computer. Thus, the KEEMUX discloses the selective input means.

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The KEEMUX has a LED light for the mode of operation. Thus, under the SCAN mode, the KEEMUX's LED light has the recognizing means for recognizing that some of the plurality of personal computers, which corresponds to at least one of the power control switches firstly pressed, is in a power-on state.

The KEEMUX's Normal Mode only controls one selected computer and transmits the control code including the power control code to the selected computer. Thus, the Normal mode is the code transmitting means for transmitting codes assigned to the power control switches to certain ones of the personal computers and powering off the same when the certain ones of the Personal computers in the power-on state are selected-by the selective inputting means and the power control switches that correspond to the certain ones of the personal computers in the power-on state are pressed again.

The KEEMUX does not explicitly disclose that the attached keyboard is the one without a power control key and KEEMUX does not explicitly disclose a plurality of power control switches.

Lee discloses that it is known to use keyboard or program to control the computer's power (abstract). Lee further discloses that it is known to employ a soft switch, which is any keyboard's key for controlling the computer power (column 1, lines 46-47), or to employ a non-soft switch, which specifies a particular keyboard key input for controlling the computer power (column 1, line 35). In the soft switch scenario, since the keyboard does not have a specific key for controlling the computer power, such keyboard is the one without the power control key. Wilder discloses a KVM switch with a plurality of power control switches and allowing user to selectively control electrical power to the computers (abstract). Wilder teaches one to equip

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KVM with the power switches to prevent any unauthorized personnel to operate the computer (column 3, lines 16-20).

Hence, it would have been obvious to one having ordinary skill in the computer art at the time Applicant made the invention to adapt Lee and Wilder's teachings onto KEEMUX because Lee teaches one to use the soft switch to avoid the circuit damage (column 1, lines 53-54) and Wilder teaches one to further enhance the system security by preventing any unauthorized personnel to power on any computers.

4. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of the KEEMUX KVM Switch by the Network Technology Inc. and Lee.

Referring to claim 2: The KEEMUX is a PC switching device installed between a keyboard and a plurality of personal computers; it connects to each computer individually and supports the SUN computer's operations, and the Sun computer features the power control via the keyboard stroke. The KEEMUX has a function to simultaneously start-up and shut-down all computers, which is the claimed powering means that can power all of the plurality of personal computers simultaneously by pressing the keyboard key when the plurality of personal computers are in a power-off state.

The KEEMUX has a LED light for the mode of operation. Thus, under the SCAN mode, the KEEMUX's LED light has the recognizing means for recognizing that some of the plurality of personal computers, which corresponds to at least one of the power control switches firstly pressed, is in a power-on state.

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The KEEMUX's Normal Mode only controls one selected computer and transmits the control code including the power control code to the selected computer. Thus, the Normal mode is the code transmitting means for transmitting codes assigned to the power control switches to certain ones of the personal computers and powering off the same when the certain ones of the Personal computers in the power-on state are selected-by the selective inputting means and the power control switches that correspond to the certain ones of the personal computers in the power-on state are pressed again.

The KEEMUX does not explicitly disclose that the attached keyboard is the one with a power control key.

Lee discloses that it is known to use keyboard or program to control the computer's power (abstract). Lee further discloses that it is known to employ a soft switch, which is any keyboard's key for controlling the computer power (column 1, lines 46-47), or to employ a specific keyboard key input for controlling the computer power (column 2, lines 6-7). In the specific keyboard input scenario, since not any key on the keyboard can control the computer power, such keyboard is the one with the power control key.

Hence, it would have been obvious to one having ordinary skill in the computer art at the time Applicant made the invention to adapt Lee's power control key onto KEEMUX because Lee teaches one to use the power control key to avoid the user mistake (column 1, line 66).

Referring to claim 3: The KEEMUX is a PC switching device installed between a keyboard and a plurality of personal computers; it connects to each computer individually and

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supports the SUN computer's operations, and the Sun computer features the power control via the keyboard stroke.

When KEEMUX powers on a connected computer under its Normal Operating Mode, it is the claimed powering means, which powers some of the plurality of personal computers previously selected by pressing the power control key on the keyboard when all of the plurality of personal computers are in a power-off state.

The KEEMUX has a LED light for the mode of operation. Thus, under the SCAN mode, the KEEMUX's LED light has the recognizing means for recognizing that some of the plurality of personal computers, which corresponds to at least one of the power control switches firstly pressed, is in a power-on state.

The KEEMUX's Normal Mode only controls one selected computer and transmits the control code including the power control code to the selected computer. Thus, the Normal mode is the code transmitting means for transmitting codes assigned to the power control switches to certain ones of the personal computers and powering off the same when the certain ones of the Personal computers in the power-on state are selected-by the selective inputting means and the power control switches that correspond to the certain ones of the personal computers in the power-on state are pressed again.

The KEEMUX does not explicitly disclose that the attached keyboard is the one with a power control key.

Lee discloses that it is known to use keyboard or program to control the computer's power (abstract). Lee further discloses that it is known to employ a soft switch, which is any keyboard's key for controlling the computer power (column 1, lines 46-47), or to employ a

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specific keyboard key input for controlling the computer power (column 2, lines 6-7). In the specific keyboard input scenario, since not any key on the keyboard can control the computer power, such keyboard is the one with the power control key.

Hence, it would have been obvious to one having ordinary skill in the computer art at the time Applicant made the invention to adapt Lee's power control key onto KEEMUX because Lee teaches one to use the power control key to avoid the user mistake (column 1, line 66).

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of the KEEMUX, Lee, Wilder, and Kwok (U.S. Patent No. 4,412,245).

Referring to claim 4: Claim 1's argument applies; furthermore, Lee discloses the transistor for controlling the connecting states (column 8, lines 59-65). Lee further discloses that a normal power supply allows the transistor to be conductive (column 8, lines 63-64), which is the claimed turning on some transistors. However neither prior art explicitly discloses the comparator. The KEEMUX has the LED for indicating each attached host computer's power-on status, but KEEMUX does not explicitly disclose the operation of powering its LED. Kwok discloses a differential current detector and a way to power the LED. Kwok discloses that it is known to couple a comparator's output to a transistor to power the LED (column 7, lines 54-58). Kwok teaches a way to power the LED by comparing the voltage differences; thus, KEEMUX can compare the voltage of the power-on host computer and power the associated LED. Hence, it would have been obvious to one having ordinary skill in the computer art at the time Applicant made the invention to adapt Lee, Wilder, and Kwok's teachings onto KEEMUX because Lee teaches one to use the soft switch to avoid the circuit damage and Kwok teaches one to utilize the

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voltage difference to power the indicative LED, and Wilder teaches one to further enhance the system security by preventing any unauthorized personnel to power on any computers.

6. Claims 5 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of the KEEMUX, Lee, and Kwok.

Referring to claim 5: Claim 2's argument applies; furthermore, Lee discloses the transistor for controlling the connecting states (column 8, lines 59-65). Lee further discloses that a normal power supply allows the transistor to be conductive (column 8, lines 63-64), which is the claimed turning on some transistors. However neither KEEMUX nor Lee explicitly discloses the comparator. The KEEMUX has the LED for indicating each attached host computer's power-on status, but KEEMUX does not explicitly disclose the operation of powering its LED. Kwok discloses a differential current detector and a way to power the LED. Kwok discloses that it is known to couple a comparator's output to a transistor to power the LED (column 7, lines 54-58). Kwok teaches a way to power the LED by comparing the voltage differences; thus, KEEMUX can compare the voltage of the power-on host computer and power the associated LED. Hence, it would have been obvious to one having ordinary skill in the computer art at the time Applicant made the invention to adapt Lee and Kwok's teachings onto KEEMUX because Lee teaches one to use the power control key to avoid the user mistake and Kwok teaches one to utilize the voltage difference to power the indicative LED.

Referring to claim 14: Claim 3's argument applies; furthermore, Lee discloses the transistor for controlling the connecting states (column 8, lines 59-65). Lee further discloses that a normal power supply allows the transistor to be conductive (column 8, lines 63-64), which is

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the claimed turning on some transistors. However neither KEEMUX nor Lee explicitly discloses the comparator. The KEEMUX has the LED for indicating each attached host computer's power-on status, but KEEMUX does not explicitly disclose the operation of powering its LED. Kwok discloses a differential current detector and a way to power the LED. Kwok discloses that it is known to couple a comparator's output to a transistor to power the LED (column 7, lines 54-58). Kwok teaches a way to power the LED by comparing the voltage differences; thus, KEEMUX can compare the voltage of the power-on host computer and power the associated LED. Hence, it would have been obvious to one having ordinary skill in the computer art at the time Applicant made the invention to adapt Lee and Kwok's teachings onto KEEMUX because Lee teaches one to use the power control key to avoid the user mistake and Kwok teaches one to utilize the voltage difference to power the indicative LED.

Response to Arguments

7. In response to Applicant's argument that Examiner mistakenly contends there is motivation to combine KEEMUX with Lee because such a soft switch operates with a DC voltage supplied from a power supply contained with the computer system (Remark, page 9, 5th paragraph): The soft switch operates with a DC voltage. When the keyboard is connected directly to the computer, the voltage is supplied by the computer; when the keyboard is connected to the computer via the KVM, the voltage is supplied to the keyboard via the KVM.

8. In response to Applicant's argument that KEEMUX does not have the function to simultaneously start-up and shut-down all computers (Remark, page 10, 3rd paragraph): The

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KEEMUX explicitly discloses the function of simultaneously start-up and shut downs all computers (see the prior art on record, NTI Network Technologies publication).

Allowable Subject Matter

9. Claims 10-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter:

Referring to claims 10, 12, and 15: The prior arts on record do not explicitly disclose a KVM with the structure of first voltage dividers dividing a voltage at each of the power supply terminals, second voltage dividers dividing a voltage at the power receiving terminal by a ratio equal to that of a corresponding one of the first voltage dividers, and the first voltage is divided by each of the first voltage dividers, and the second voltage is divided by each of the second voltage dividers.

Referring to claims 11, 13, and 16: The prior arts on record do not explicitly disclose a KVM including the structure of comparators driven by power supplied from the power supply terminals of the plurality of personal computer or from the power receiving terminal of the keyboard.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

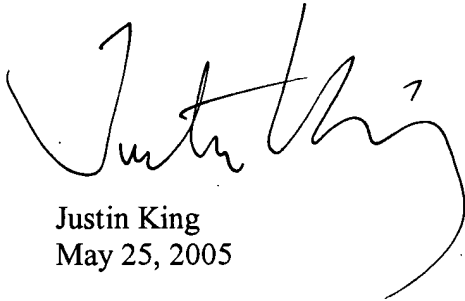
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin I. King whose telephone number is 571-272-3628. The examiner can normally be reached on max flex. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark H. Rinehart can be reached on 571-272-3632 or on the central telephone number, (571) 272-2100. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR


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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lastly, paper copies of cited U.S. patents and U.S. patent application publications will cease to be mailed to applicants with Office actions as of June 2004. Paper copies of foreign patents and non-patent literature will continue to be included with office actions. These cited U.S. patents and patent application publications are available for download via the Office's PAIR. As an alternate source, all U.S. patents and patent application publications are available on the USPTO web site (www.uspto.gov), from the Office of Public Records and from commercial sources. Applicants are referred to the Electronic Business Center (EBC) at <http://www.uspto.gov/ebc/index.html> or 1-866-217-9197 for information on this policy. Requests to restart a period for response due to a missing U.S. patent or patent application publications will not be granted.



Justin King
May 25, 2005



TIM VO
PRIMARY EXAMINER